

**Notice of Allowability**

Application No.

09/881,404

Applicant(s)

HU ET AL.

Examiner

Art Unit

Paulos M. Natnael

2614

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address--

All claims being allowable, PROSECUTION ON THE MERITS IS (OR REMAINS) CLOSED in this application. If not included herewith (or previously mailed), a Notice of Allowance (PTOL-85) or other appropriate communication will be mailed in due course. **THIS NOTICE OF ALLOWABILITY IS NOT A GRANT OF PATENT RIGHTS.** This application is subject to withdrawal from issue at the initiative of the Office or upon petition by the applicant. See 37 CFR 1.313 and MPEP 1308.

1. ☒ This communication is responsive to amendment received 3-30-05.
2. ☒ The allowed claim(s) is/are 1-19,21-29,31,33-42,44 and 46-51,renumbered as 1-46.
3. ☒ The drawings filed on 14 June 2001 are accepted by the Examiner.
4. ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
  - a) ☐ All    b) ☐ Some\*    c) ☐ None    of the:
    1. ☐ Certified copies of the priority documents have been received.
    2. ☐ Certified copies of the priority documents have been received in Application No. \_\_\_\_\_.
    3. ☐ Copies of the certified copies of the priority documents have been received in this national stage application from the International Bureau (PCT Rule 17.2(a)).

\* Certified copies not received: \_\_\_\_\_.

Applicant has THREE MONTHS FROM THE "MAILING DATE" of this communication to file a reply complying with the requirements noted below. Failure to timely comply will result in ABANDONMENT of this application.  
**THIS THREE-MONTH PERIOD IS NOT EXTENDABLE.**

5. ☐ A SUBSTITUTE OATH OR DECLARATION must be submitted. Note the attached EXAMINER'S AMENDMENT or NOTICE OF INFORMAL PATENT APPLICATION (PTO-152) which gives reason(s) why the oath or declaration is deficient.
  6. ☐ CORRECTED DRAWINGS (as "replacement sheets") must be submitted.
    - (a) ☐ including changes required by the Notice of Draftsperson's Patent Drawing Review (PTO-948) attached
      - 1) ☐ hereto or 2) ☐ to Paper No./Mail Date \_\_\_\_\_.
    - (b) ☐ including changes required by the attached Examiner's Amendment / Comment or in the Office action of Paper No./Mail Date \_\_\_\_\_.
- Identifying indicia such as the application number (see 37 CFR 1.84(c)) should be written on the drawings in the front (not the back) of each sheet. Replacement sheet(s) should be labeled as such in the header according to 37 CFR 1.121(d).
7. ☐ DEPOSIT OF and/or INFORMATION about the deposit of BIOLOGICAL MATERIAL must be submitted. Note the attached Examiner's comment regarding REQUIREMENT FOR THE DEPOSIT OF BIOLOGICAL MATERIAL.

**Attachment(s)**

1. ☐ Notice of References Cited (PTO-892)
2. ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
3. ☐ Information Disclosure Statements (PTO-1449 or PTO/SB/08),  
Paper No./Mail Date \_\_\_\_\_
4. ☐ Examiner's Comment Regarding Requirement for Deposit  
of Biological Material
5. ☐ Notice of Informal Patent Application (PTO-152)
6. ☐ Interview Summary (PTO-413),  
Paper No./Mail Date \_\_\_\_\_
7. ☐ Examiner's Amendment/Comment
8. ☒ Examiner's Statement of Reasons for Allowance
9. ☐ Other \_\_\_\_\_



Paulos M. Natnael  
Primary Examiner  
Art Unit: 2614

## DETAILED ACTION

### *Allowable Subject Matter*

1. Claims **1-19,21-29,31,33-42,44,46-51** are allowed.
2. The following is an examiner's statement of reasons for allowance: the prior art fails to disclose a method of synchronizing a digital audio signal with a corresponding digital video signal comprising: receiving an audio frame sampled at an audio sampling rate at a digital signal processor; temporarily storing the audio frame in the digital signal processor prior to encoding, setting the encoding parameters of a digital signal processor prior to receiving a start command from a host; receiving the start command from the host instructing the digital signal processor to begin encoding the audio frame in response to a first video synchronization signal, receiving the first video synchronization signal at the digital signal processor, and, encoding the audio frame at the audio sampling rate at which the audio frame was received upon receiving the first's video synchronization signal, as in claim 1;

A method of synchronizing a digital audio signal with a corresponding digital video signal comprising: receiving a first video synchronization signal: receiving a stop command from a host instructing a digital signal processor to count the number audio samples of the audio frame occurring subsequent to the occurrence of a second video synchronization signal; receiving a second video synchronization signal at the digital signal processor; and counting the number of samples of an audio frame representing a time duration equal to the difference between the second video synchronization signal

and a last encoded sample of the audio frame, discarding the counted samples prior to combining the remaining portion of the audio frame with the video frame in anticipation of playback, as in claim **19**.

an audio generating means for generating an audio frame at an audio sampling rate; a video generating means for generating a video frame and a plurality of video synchronization signals, a digital signal processor operable to temporarily store the audio frame, then encode the audio frame at an audio sampling rate in response to a first video synchronization signal, wherein the first video synchronization signal is the next generated video synchronization signal immediately following the transmission of a start command from the host, wherein the digital signal processor includes a number of registers for storing data being processed, an arithmetic and logic unit for performing logical operations as well as arithmetic operations, and a parallel connected bit shifting unit for performing bit shifting and masking, a host microprocessor operable to send command signals to, and to set the encoding parameters of the digital signal processor application, as in claims **32 and 41**;

A method of synchronizing a digital audio signal with a corresponding digital video signal comprising: receiving a first video synchronization signal: receiving a stop command from a host instructing a digital signal processor to count the number audio samples of the audio frame occurring subsequent to the occurrence of a second video synchronization signal; receiving a second video synchronization signal at the digital signal processor, wherein the second video synchronization signal is the next generated video synchronization signal immediately following the transmission of the stop

command from the host; and counting the number of samples of an audio frame representing a time duration equal to the difference between the second video synchronization signal and a last encoded sample of the audio frame, as in claim 51.

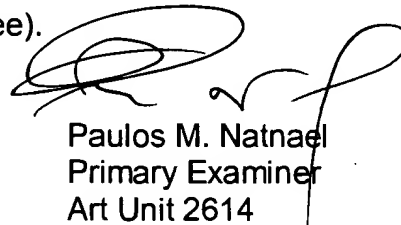
Any comments considered necessary by applicant must be submitted no later than the payment of the issue fee and, to avoid processing delays, should preferably accompany the issue fee. Such submissions should be clearly labeled "Comments on Statement of Reasons for Allowance."

### ***Conclusion***

Any inquiry concerning this communication or earlier communications from the examiner should be directed to Paulos M. Natnael whose telephone number is (571) 272-7354. The examiner can normally be reached on 10:00am - 6:30pm.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, John Miller can be reached on (571)272-7353. The fax phone number for the organization where this application or proceeding is assigned is 703-872-9306.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free).



Paulos M. Natnael  
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June 14, 2005